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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10:067,218	02:07/2002	Dan A. Steinberg	23091/23 (ACT-214)	6453

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HALEOS, INC.  
3150 STATE STREET  
BLACKSBURG, VA 24060

EXAMINER

KIM, ELLEN E

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 09/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/067,218

Applicant(s)

STEINBERG, DAN A.

Examiner

Ellen E Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-31 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 15-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

The limitation, "the groove" in the second line of claim 15 is not previously described in the claim.

Whether the "first, second and third pits" in claim 16 are different from the pit in claim 15.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-3, 6-10, 12-14, 23, and 25-31 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Tabuchi [USPAT 5,611,006].**

Tabuchi discloses a hybrid type integrated optical device comprising a substrate having dry etched sections 25a-e, and wet etched sections 24, 42a-d [see front drawing, column

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14, lines 34-48]. SiO<sub>2</sub> films are formed [column 14, lines 40-44] at the side walls of the openings 25a-e for grooves forming.

In re claim 6, Tabuchi shows at column 12, lines 64-end that Ion beam etching is utilized.

In re claims 7 -9, Tabuchi shows at column 10, lines 17-26 that silicon nitride and silicon dioxide are utilized, and removing step.

In re claim 12, the smoothing process is shown in fig. 8A-C.

In re claims 13 and 14, Tabuchi shows at column 10, lines 38-43 that {331} planes are etched by KOH solution.

In re claim 29, the definition of "wings" is not clearly described in the claim. Therefore, any side walls of the pits are considered as wings.

**Claims 23-27 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Takahashi [USPAT 5,339,377].**

Takahashi discloses an optical fiber splicer comprising a substrate having plurality of pits and grooves [fig. 4] with curved and tapered groove as shown in fig. 9.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 11, and 15-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tabuchi.**

Tabuchi discloses every aspect of claimed invention except for the U groove.

Official Notice is taken that utilizing U groove instead of V groove is old and well known in the art. See In Re Malcolm 1942 C.D. 589:543 O.G. 440 MPEP 706.02 (a).

It would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify Tabuchi's device to have U groove instead of V groove for the purpose of better holding of the exact diameter size of the optical fiber.

With the respect to device claims 15-22, note that the claimed method of forming the device is not germane to the issue of patentability of the device itself. Therefore this limitation has not given any patentable weight.

***Allowable Subject Matter***

**Claims 4 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

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The following is a statement of reasons for the indication of allowable subject matter: the prior art does not disclose or suggest a method for forming a V-groove in a substrate having a varying width comprising all the specific elements with the specific combination including a first section having a different width than the second section as set forth in claims 4 and 5.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Further references of interest are cited on Form PLO-892, which is attachment to this office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen Kim whose telephone number is (703) 308-4946. The examiner can normally be reached on Monday and Thursday.

Ellen E. Kim  
Primary Examiner  
August 25, 2003/EK

